

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims, in the application:

1. (Original) A light modulator, comprising:
a mirror having first and second surfaces suspended over a cavity arranged under the first surface;
supports attached to the second surface of the mirror;
support posts suspending the mirror over the cavity by the supports, the support posts and supports being formed from a same layer of material; and
an electrode and an optical stack positioned opposite the first surface across the cavity from the mirror such that activation of the electrode causes the mirror to move towards the electrode, changing dimension and interference properties of the cavity.
2. (Original) The light modulator of claim 1, the modulator comprising a bus structure attached to the support posts adjacent to the second surface of the mirror.
3. (Original) The light modulator of claim 1, the modulator comprising a landing pad arranged upon the electrode and optical stack.
4. (Original) The light modulator of claim 3, the landing pad being arranged underneath the mirror.
5. (Original) The light modulator of claim 3, the landing pad being arranged so as to contact the supports.
6. (Original) A light modulator, comprising:
a mirror having first and second surfaces suspended over a cavity arranged under the first surface;
supports attached to the second surface of the mirror;
support posts suspending the mirror over the cavity by the supports, the support posts having support post plugs; and
an electrode and an optical stack positioned opposite the first surface across the cavity from the mirror such that activation of the electrode causes the mirror to move towards the electrode, changing dimension and interference properties of the cavity.

Appl. No. : **10/644312**
Filed : **August 19, 2003**

7. (Original) The light modulator of claim 6, the modulator comprising a bus structure attached to the support posts adjacent to the second surface of the mirror.

8. (Original) The light modulator of claim 6, the modulator comprising a landing pad arranged upon the electrode and optical stack.

9. (Original) The light modulator of claim 8, the landing pad arranged underneath the mirror.

10. (Original) The light modulator of claim 8, the landing pad arranged so as to contact the supports.

11. (Original) A light modulator, comprising:

a mirror having first and second surfaces suspended over a cavity arranged under the first surface;

supports attached to the second surface of the mirror;

support posts suspending the mirror over the cavity by the supports;

a bus structure attached to the support posts adjacent to the second surface of the mirror; and

an electrode and an optical stack positioned opposite the first surface across the cavity from the mirror such that activation of the electrode causes the mirror to move towards the electrode, changing dimension and interference properties of the cavity.

12. (Original) The modulator of claim 11, the support posts being formed from a same layer as the supports.

13. (Original) The modulator of claim 11, the support posts being formed by support post plugs.

14. (Original) The modulator of claim 11, the modulator comprising a landing pad arranged upon the electrode and optical stack.

15. (Cancelled)

16. (Original) A method of manufacturing a light modulator, the method comprising:

forming an electrode and optical stack on the back of a transparent substrate;

depositing a first sacrificial layer upon the electrode and optical stack;

forming mirrors on the first sacrificial layer;

depositing a second sacrificial layer upon the mirrors;

forming post holes adjacent to the mirrors;
using a planarization layer to form support post plugs;
depositing a flexible layer on the support post plugs and forming attachments between the flexible layer and the mirror; and
removing the first and second sacrificial layers.

17. (Original) The method of claim 16, the method comprising forming bus structures on the flexible layer arranged over the support post plugs.

18. (Original) The method of claim 16, forming attachments further comprising forming supports of predetermined mechanical properties such that the mirror assumes a quiescent state at a predetermined vertical position from the electrode and optical stack.

19. (Original) The method of claim 16, forming attachments further comprising forming supports with predetermine physical restraints that cause the mirror to move to a predetermined position relative to the electrode and optical stack upon application of a constant voltage.

20. (Original) The method of claim 16, the method comprising forming a landing pad array upon the electrode and optical stack.

21. (Original) The method of claim 20, forming a landing pad further comprising forming landing pads of varying thicknesses to control an amount of movement of the mirror.

22. (Original) The method of claim 16, depositing a first sacrificial layer further comprising depositing three thicknesses of the first sacrificial layer, the thicknesses deposited for a modulator being dependent upon a color designation of that modulator.

23. (Original) A method of manufacturing a light modulator, the method comprising:
forming an electrode and optical stack on the back of a transparent substrate;
depositing a first sacrificial layer upon the electrode and optical stack;
forming mirrors on the first sacrificial layer;
depositing a second sacrificial layer upon the mirrors;
forming post holes adjacent to the mirrors;
depositing a flexible layer on the second sacrificial layer such that attachments between the flexible layer and the mirror are formed and the flexible layer fills the post holes forming support posts; and

removing the first and second sacrificial layers.

24. (Original) The method of claim 23, the method comprising forming bus structures on the support posts.

25. (Original) The method of claim 23, depositing the flexible layer further comprising depositing the flexible layer and patterning and etching it to provide supports of predetermined mechanical properties such that the mirror assumes a quiescent state at a predetermined vertical position from the electrode and optical stack.

26. (Original) The method of claim 23, forming attachments further comprising depositing the flexible layer and patterning and etching it to form supports of predetermined physical restraints that cause the mirror to move to a predetermined position relative to the electrode and optical stack upon application of a constant voltage.

27. (Original) The method of claim 23, the method comprising forming a landing pad array upon the electrode and optical stack.

28. (Original) The method of claim 27, forming a landing pad array further comprising forming landing pads of varying thicknesses to control an amount of movement of the mirror.

29. (Original) The method of claim 23, depositing a first sacrificial layer further comprising depositing three thicknesses of the first sacrificial layer, the thicknesses deposited for a modulator being dependent upon a color designation of that modulator.

30. (Original) A method of manufacturing a light modulator, the method comprising:
forming a mirror over a first sacrificial layer attached to a flexible layer over a second sacrificial layer and having support posts;
depositing a third sacrificial layer over the flexible layer;
forming bus structures in a conductive layer on top of the third sacrificial layer arranged over the support posts; and
removing the sacrificial layers.

31. (Original) The method of claim 30, forming a mirror comprising forming a mirror having support posts comprised of a portion of the flexible layer.

32. (Original) The method of claim 30, forming a mirror comprising forming a mirror having support post plugs.

Appl. No. : **10/644312**
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33. (Original) The method of claim 20, the method comprising forming a landing pad under the first sacrificial layer.